

THERMAL BARRIER COATINGS HAVING LOWER LAYER FOR IMPROVED
ADHERENCE TO BOND COAT

ABSTRACT

[0042] A thermal barrier coatings for the underlying substrate of articles that operate at, or are exposed to, high temperatures. The thermal barrier coating includes a zirconia-containing upper layer wherein the zirconia is stabilized in the cubic crystalline phase to reduce the thermal conductivity of the coating. The thermal barrier coating further includes a zirconia-containing lower layer stabilized in the tetragonal crystalline phase that increases the adherence of the upper layer to the bond coat layer that overlies the substrate of the article to improve the resistance of the coating to spallation.